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THE

NATURAL HISTORY

OF

BRITISH INSECTS;

EXPLAINING THEM

IN THEIR SEVERAL STATES,

WITH THE PERIODS OF THEIR TRANSFORMATIONS, THEIR FOOD, OECONOMY, &c.

TOGETHER WITH THE

HISTORY OF SUCH MINUTE INSECTS

AS REQUIRE INVESTIGATION BY THE MICROSCOPE.

THE WHOLE ILLUSTRATED BY

COLOURED FIGURES,

DESIGNED AND EXECUTED FROM LIVING SPECIMENS.

By E. DONOVAN.

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MDCCXCVII.

THE

NATURAL HISTORY

OF

BRITISH INSECTS.

PLATE CLXXXI.

PHALÆNA SYRINGARIA.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

GEOMETRA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings angulated, indented, fine light grey, with ſhades of fleſh colour and brown: a brown mark acroſs the Wings, which in an expanded Inſect forms a feſtoon.

PHALÆNA SYRINGARIA: pectinicornis, alis ſuberoſis, omnibus griſeo flaveſcentibus, ſtrigis repandis fuſcis albiſque. *Fab. Syſt. Ent.* 622. 13.—*Spec. Inſ.* 2. 244. 17.—*Linn. Syſt. Nat.* 2. 860. 206.

Phalæna pectinicornis, alis margine sinuatus, fulvo, nigro, fusco roseoque marmoratis, singulis subtus puncto nigro, superioribus extremo dilatato, recurvis. *Geoff. Inf.* 2. 126. 32.
Roes. Inf. 1. *phal.* 3. *tab.* 10.

The English name has been given to this Moth by some collectors, on account of its being found a local species, and most frequent in Richmond park.

The Larva of this Insect has a very singular appearance, to which the hook on the back greatly contributes when it is nearly full fed and going into the pupa state. It feeds on the Jasmine and Lilac, and does not thrive well on any other plants. It is in the Caterpillar state in April, changes to chrysalis in May: the Fly comes forth in June.

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PLATE CLXXXII.

MELOE MONOCEROS.

HORNED MELOE.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ globular, laſt globule oval. Thorax roundiſh. Elytra ſoft. Head gibbous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax pointed like a horn over the head. Shells brown, with a longitudinal ſtreak and ſpot on each.

MELOE MONOCEROS: *Linn. Syſt. Nat.* 2. 681. 14.
NOTOXUS MONOCEROS: thorace in cornu ſupra caput protenſo, elytris puncto faſciaque nigris. *Fab. Syſt. Ent. Tom.* 1. 211. 6.
Notoxus. *Geoff. Inſ.* 1. 356. *tab.* 6. *fig.* 8.
Attelabus Monoceros. *Lin. Fn. Sv.* 638.
Schæff. Icon. tab. 188. *fig.* 3.

Linnæus ſeems to have found much difficulty in determining the genus of this inſect; once placing it amongſt the Attelabi of his ſyſtem, and thence removing it to the Meloe tribe. Geoffroy has another generical name, *notoxus*, and this Fabricius has adopted in his laſt work.

This

This is certainly a moſt ſingular Inſect, and altogether unlike any other we know of in England. We cannot ſay whether it feeds on any particular food, or what are its peculiarities, for we have only ſeen one ſpecimen beſides that from which the annexed drawing is taken; and the only information we receive from the authors above quoted is, that it is a native of Europe; and is found on umbelliferous plants. It was taken in May.

Fig. 1. the natural ſize. Fig. 2. magnified.

PLATE CLXXXIII.

PHALÆNA CAMELINA.

DARK PROMINENT MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

Bombyx.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings fine ruſt colour, with two oblique waves acroſs: indented edges: poſterior margin, with one large and one ſmall tuft prominent on the upper part of the Inſect when at reſt.

PHALÆNA CAMELINA: alis deflexis denticulatis brunneis: omnibus denticulo dorſali. *Linn. Syſt. Nat.* 2. 832. 80.—*Fn. Sv.* 1145.
Fab. Ent. Syſt. 3. *p.* 450. 133.
Wien. Verz. 63. 3.
Roeſ. Inſ. 1. *phal.* 2. *tab.* 28.

The Caterpillar of this Moth is found in Auguſt, on the leaves of the Oak, Willow, Lime, &c. The Moth comes forth late in May, or early in June.

PLATE CLXXXIV.

PAPILIO ARION.

MAZARINE BLUE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed. Wings when at reſt, erect. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Above brown, diſk of the wings fine blue, with black ſpots. Beneath grey, with a number of ſmall eyes.

PAPILIO ARION: alis ſupra fuſcus: diſco cœruleo; maculis atris, ſubtus canis: punctis ocellaribus. *Linn. Syſt. Nat.* 2. 789. 230.—*Fn. Sv.* 1073.

Heſperia Arion. *Fab. Ent. Syſt.* 3. 293. 118.
Roeſ. Inſ. 3. *tab.* 45. *fig.* 3. 4.
Schæff. Icon. tab. 98. *fig.* 5. 6.
Eſp. pap. 1. *tab.* 20. *fig.* 2.

Papilio Arion is a very ſcarce Inſect in this country; and it does not appear to be much more common in any other part of Europe. The authors quoted above have given figures or deſcriptions of it, but are entirely ignorant of its larva, or pupa; and Fabricius, who has ſelected the obſervations of all the preceding authors who have deſcribed it, ſays only, *Habitat in Europæ Pratis.*

Mr. Lemon, a collector of eminence some years since, met with it in England. We have a specimen which was taken by him, as appears from a note with it. Roesel's figure is of a finer blue than any we have seen; but we have no doubt of its being a most brilliant Insect in a recent state.

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PLATE CLXXXV.

FIG. I.

CHRYSOMELA CALMARIENSIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ knotted, enlarging towards the ends. Corſelet margined.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oblong: yellow: a longitudinal ſtreak of black down each ſhell.

CHRYSOMELA CALMARIENSIS: oblongiuſcula ferruginea, elytris macula longitudinali nigricante. *Linn. Syſt. Nat.* 2. 600. 101.

Crioceris Calmarienſis: ovata cinerea, elytris vitta lineolaque baſeos nigris. *Fab. Syſt. Ent.* 119. 4.—*Spec. Inſ.* 1. 150. 6.

Galleruca pallida, thorace nigro variegato, elytris faſciis duabus longitudinalibus nigris. *Geoff. Inſ.* 1. 253. 3.—*Sulz. Roem. Inſ. tab.* 3. *fig.* 16.

Fabricius ſays, this Inſect lives on the Willow and Alder. It is found in every part of Europe, but is ſcarce in England.

It is a very pretty ſpecies. The underſide has rather a bronze appearance: above, in recent ſpecimens, the light colour is very

fine yellow, but turns brown afterwards: the ſtripes down the elytra are not deep black, but have a greeniſh tint.—Taken in May. Length a quarter of an inch.

FIG. II.

MYCETOPHAGUS QUADRIMACULATUS.

Fungus Beetle with four Spots.

Coleoptera.

GENERIC CHARACTER.

Palpi four, unequal. *Maxilla* membranaceous, with a tooth or ſpine. Lip round, entire. Antennæ gradually enlarge towards the end. *Fab. Gen. Inſ.*

SPECIFIC CHARACTER

Entirely black, except one large yellow brown ſpot on the baſe of the elytra, and another near their extremities.

Mycetophagus Quadrimaculatus: rufus thorace elytriſque nigris, his maculis duabus rufis. *Fab. Ent: Syſt. t.* 2. *n.* 1. *p.* 497.

Ips Maculata. *Fab. Mant. Inſ.* 1. *n.* 8. *p.* 45.

Tritoma. *Geoffr. Inſ. t.* 1. *p.* 335. *tab.* 6. *fig.* 2. *e. f.*

Silphoides boleti. *Herbſt. Archiv.* 4 *tes. Heft.* 2. 11. *p.* 41. *tab.* 21. *fig.* 51.

Der Viergefleckte Pfiſſerkäfer. *Panz. Faun. Inſ. Germ.*

Three ſpecimens of this rare ſpecies were found together, concealed in the porous part of the Honey-comb Boletus *. According to *Herbſt. Archiv.* it is uſually found on plants of this genus. It is not ſcarce in Germany.

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* Boletus Cellulofus.

The

The vaſt addition of new ſpecies of Inſects that *Fabricius* has made in his latter works, renders it difficult, and in ſome inſtances impoſſible, to refer them to the ſyſtem of *Linnæus*; and though we would at all times more willingly refer any new kind to that ſyſtem, and quote the Fabrician account amongſt the ſynonyms, than adopt the new generic diſtinctions of Fabricius, or any other author, we muſt not ſacrifice propriety to predilection. If Linnæus himſelf had noticed many of the newly diſcovered kinds, he muſt have altered and improved his ſyſtem to admit them; which is a great excuſe for Fabricius having made ſo many genera.

The little Inſect before us may be referred to the Silpha genus of Linnæus; but as his definition of the Silphæ has been ſubjected to ſo many objections and amendments of later authors, we forbear placing it amongſt them. Linnæus has made no diſtinction between ſuch ſpecies as have perfoliated antennæ, and thoſe with antennæ increaſing in bulk from the baſe to the end †, thereby including *S. Veſpillo* with *S. thoracica* and *S. obſcura*, though in an early edition of the *Fauna Suecica*, *S. Veſpillo* was amongſt the *Scarabæi*, and the two laſt with the *Caſſidæ*.

Schæffer divided the Silphæ of Linnæus into two genera, *Silpha* and *Peltis*. *Geoffroy* arranged ſome of them amongſt his *Dermeſtides*, and formed his genus *Peltis* of ſuch as have the thorax and elytra ſtrongly margined, and perfoliated antennæ. *Geoffroy* deſcribed our preſent ſubject under the name *Tritoma*. *Fabricius* afterwards, in his Mantiſſa, arranged it under *Ips*, a new genus, formed from part of the *Silphæ* of Linnæus and *Dermeſtides* of Geoffroy. In the Entomologia Syſtematica, he has again ſeparated the Ips, and made *Mycetophagus* a new genus of fifteen ſpecies, in which he includes this Inſect.

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† *Silpha Antennæ* extrorſum craſſiores. *Elytra* marginata. *Caput* prominens. *Thorax* planiuſculus, marginatus. *Linn. Gen. Inſ.*

To thoſe who have adopted the ſyſtem of Fabricius, it is unneceſſary to ſay, that the fundamental part of his arrangement is taken from the mouth of the Inſect, which certainly is objectionable, becauſe that part is dry, and very frequently injured or deſtroyed in Inſects that have been long in a cabinet, and is very ſmall in moſt kinds when allve ; ſo that, though we have followed his arrangement in the generic definition, we have been leſs prolix than a full elucidation of it might require.

The figures in the annexed plate 2. 2. repreſent the natural ſize and magnified appearance.

PLATE CLXXXVI.

PAPILIO HERO.

SCARCE MEADOW-BROWN BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed. Wings, when at reſt, erect. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire: brown above. Beneath, a large black eye near the anterior margin of the firſt wings: ſix ſmaller eyes on the ſecond Wings.

PAPILIO HERO: alis integerrimis fulvis: ſubtus anticis ocello, porticis fenis. *Linn. Syſt. Nat.* 2. 793. 253.—*Fn. Sv.* 1047.—*Fab. Ent. Syſt.* 3. *p.* 222. 695.

Papilio Hero. *Wien. Verz.* 168. 13.

Papilio Typhon. *Eſp. pap. tab.* 35. *fig.* 3. 4.

This is a local ſpecies: it is very abundant in ſome marſhy parts of Lancaſhire; but we have not learnt that it has been taken in any other part of the kingdom. Many of the curious in London are particularly indebted to Mr. Phillips, of Mancheſter, for enriching their cabinets with *Papilio Hero*; for, though it is a plain Inſect, it is eſteemed for its rarity, few Entomologiſts having travelled into that part of the country to collect Inſects.

PLATE

PLATE CLXXXVII.

PHALÆNA EXOLETA.

SWORD GRASS MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

Noctua.

Antennæ in both ſexes, like a briſtle.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted. Wings lance-ſhaped, varied with grey and brown, a kidney-ſhaped ſpot in the middle: four white ſpots on the anterior margin.

PHALÆNA EXOLETA: criſtata, alis lanceolatis convolutis fuſco cinereoque nebuloſis, punctis quatuor marginalibus albis. *Fab. Syſt. Ent.* 617. 116.—*Spec. Inſ.* 2. 239. 144.

The beautiful Caterpillar of this Moth is found on Sword Graſs in Auguſt. Though its trivial name implies that it is peculiar to this

this plant, ſeveral others are mentioned by authors as proper food for it, amongſt theſe are the Bell flower *, Orach †, and common Pea. The Moth appears in May: frequents marſhy places.

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* Campanula. † Atriplex.

PLATE CLXXXVIII.

HEMEROBIUS CHRYSOPS.

NEUROPTERA.

Wings four, tranſparent, reticulated. Tail without a ſting.

GENERIC CHARACTER.

Mouth armed with two teeth and four palpi. Wings deflected. Antennæ ſetaceous. Thorax convex.

GENERIC CHARACTER

AND

SYNONYMS.

Greeniſh. Wings tranſparent, reticulated, with dark ſpots.

HEMEROBIUS CHRYSOPS: viridi nigroque varius, alis hyalinis: venis viridibus; lineolis nigris reticulatis. *Linn. Syſt. Nat.* 2. 912. 4.—*Fn. Sv.* 1505.
Geoff. Inſ. 2. 254. 2.
Fab. Ent. Syſt. t. 2. 83. *f.* 6.
Friſch. Inſ. 4. 40. *tab.* 23.
Roeſ. Inſ. 3. *tab.* 21. *fig.* 4.
Sulz. Hiſt. Inſ. tab. 25. *fig.* 1.

This Inſect was formerly held in great eſteem amongſt the Engliſh collectors, on account of its rarity; and has been purchaſed for their cabinets at a conſiderable price *. The late Mr. Bentley, who

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* Half a guinea was the uſual price for a pair of them.

had

had been more than twenty years endeavouring to make his cabinet the moſt complete in England, never met with it.

About three years ſince, they were taken in great plenty near London, both at Batterſea and Highgate; and have been met with in other places ſince that time. Like the Ephemeræ, and other gauſe-wing Inſects, it delights in moiſt places, particularly among the reeds. The larva is unknown, but we ſuppoſe that it lives in that ſtate in the water; and which moſt likely it does not leave till it becomes a winged creature. The larva of ſome ſpecies of this genus feed on the ſmaller kinds of Inſects.

The wings are the moſt pleaſing objects for the microſcope that can be imagined: the reticulations and feathered edges are ſo tranſparent, that they may be examined with the deepeſt magnifiers, which is an advantage few objects of ſuch a ſize poſſeſs. The magnified figure is given, with the natural ſize in the annexed plate.

Fabricius has erroneouſly quoted the ſeventh and eighth figure of the fifth plate of *Schæffer*'s *Icones*, which is certainly no other than the common kind, Hemorobius perla, and which is ſo often found in gardens with a fine golden eye. The figure quoted in *Sulzer* and *Roeſel* agree with our ſpecimen.

PLATE CLXXXIX.

PHALÆNA MENTHRASTIRI.

SPOTTED WHITE MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

Bombyx.

SPECIFIC CHARACTER

AND

SYNONYMS.

White with black ſpots. Abdomen orange, with black ſpots.

PHALÆNA MENTHRASTRI: alis deflexis albis nigro ſubpunctatis, abdominis dorſo fulvo nigro punctato, femoribus anticis luteis. *Fab. Ent. Syſt. T.* 3. *p.* 1. 452. 140.

Bombyx Menthraſtri. *Wien. Verz* 54. 2.—*Roeſ. Inſ.* 1 *Phal.* 2. *t.* 46. *Knoch. Beytr.* 3. *tab.* 2. *fig.* 5. 13.

This Inſect has been confounded with Phalæna lubricipeda by Linnæus; he makes it the variety β after De Geer. In this he has been followed by many other authors; and though Roeſel, by giving the larva and pupa of each, in two diſtinct plates, evidently thought them different ſpecies, his obſervations had no weight with other Naturaliſts; even Fabricius, in his *Species Inſectorum*, gives them under

under one ſpecific name. In his laſt work, *Entomologia Syſtematica*, he has divided them, leaving the P. lubricipeda under its former name, and giving the ſpecific name Menthraſtri to the white ſort, as had been done in *Wien. Verz.* 54. 2. Fabricius mentions it as a native of Germany, but from the figure of Roeſel no doubt can be entertained of its being preciſely the ſame as our Engliſh ſpecies.

The Caterpillars of both ſorts are very general feeders; they will eat, oak, fruit trees, and wild plants of almoſt every kind. They are common in the ſummer, change to chryſalis about Auguſt, and appear in the winged ſtate in May and June; but, there is more than one brood of them in the courſe of the year, ſo that the time of their appearance is uncertain. The Caterpillars change their ſkins often; and change their colours at the ſame time. Thoſe of Phalæna Menthraſtri when ſmall are a very light tranſparent brown: then brown with dark ſtripes. It is not black till it is in the laſt ſkin; and then, in many, the colour inclines to brown.

PLATE CXC.

SPHINX CELERIO.

SILVER-STRIPE HAWK MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thickeſt in the middle. Wings, in general deflexed when at reſt. Fly ſlow. Morning and evening only.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings brown, with a broad oblique band of ſilver white extending from the poſterior margin to the tip of the wing. Lower wings black, with ſix large red ſpots on each.

Sphinx Celerio: alis integris griſeis: ſtriis albis, poſticis fuſcus: maculis ſex rubris. *Linn. Syſt. Nat.* 2. 800. 12.
Fab. Ent. Syſt. T. p. 1. 370. 43.
Roeſ. Inſ. 3. *tab.* 8.
Friſch. Inſ. 13. *tab.* 1. *fig.* 2.
Cram. Inſ. 3. *tab.* 25. *B.*

The Sphinx Celerio ſtands pre-eminent in the liſt of the Inſects of this country, whether we conſider its rarity, or uncommon beauty. Indeed, amongſt the Inſects of this tribe that are brought from remote countries, even from Aſia, which boaſts the moſt ſplendid ſpecies, the varieties of Sphinx Celerio are often the moſt beautiful; it muſt however be owned, that, in countries where the

 climate,

climate, and luxuriance of the ſoil contribute to enrich the juices of the plants on which the Inſects are nouriſhed, they are larger and their colours more vivid than any of the ſame kind produced in the northern countries of Europe.

Several years ſince, Mr. Francillon, of Norfolk-ſtreet in the Strand, had a living ſpecimen of this Inſect brought to him: it was taken in Bunhill-fields burying-ground. It is ſtill preſerved in his cabinet.

We have heard of other ſpecimens being taken in this country; but the only inſtance we can quote with confidence is, that Mr. Latham, formerly of Dartford, and well known for his ſcientific reſearches in natural hiſtory, has a ſpecimen which was taken at Eltham, in Kent. Few collections of conſequence are without this Inſect, but they are in general natives of Germany.

Roeſel has given a figure of this Sphinx, with its larva and pupa; and, as we could never reaſonably expect to meet with it in theſe ſtates in England, correct copies of his figures are given in Plate 191. The works of Roeſel are not in the hands of many; and, we are convinced that Plate will be acceptable to moſt of our readers.

Sphinx Celerio is found on the vine.

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PLATE CXCII.

PHALÆNA HEXAPTERATA.

SERAPHIM MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings varied with brown and grey. Second pair white, with an appendage at the baſe of each, reſembling a ſmall wing.

PHALÆNA HEXAPTERA: ſeticornis alis fuſco griſeoque variis: poſticis albis baſi duplicatis. *Fab. Ent. Syſt. Tom.* 3. *p.* 2. 193. 233.

Phalæna Hexapterata. *Wien. Verz.* 109. 10.

Fabricius has given an accurate deſcription * of this extraordinary Inſect; but he makes no reference to any work that contains a figure of it. The nineteenth plate of Kleman's Continuation of Roeſſel's *Inſecten-Beluſtigungen*, entitled *Inſecten-Geſchichte*, certainly

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* Media. Alæ anticæ griſeæ, fuſco undatae imprimis baſi apiceque, in medio parum dilutiores lunula fuſca. Poſticæ albae ad baſin ala notha, rotundata, alba, immaculata. Subtus omnes cinereæ puncto medio, fuſco.—*Fab.*

eſcaped his notice; for in that plate we find both ſexes, Figures *a*, *b*: from this account we learn that Phalæna Hexapterata is a native of Germany. The female has four wings: the male appears at firſt ſight to have ſix, which is more than any tribe of Inſects are furniſhed with; a ſmall appendage very much reſembling a wing, and of the ſame texture, ariſes from the baſe of the ſecond pair of wings next the abdomen. The nerves of the true wing ramify into this appendage; which when the Inſect is expanded, give it moſt ſingular appearance. In the annexed plate this appendage is magnified, to enable us more accurately to exhibit its true form and tendons.

Our ſpecimen was taken on Epping Foreſt in 1795. It is very rare in England. Fabricius ſays it feeds on the Beech *.

* Habitat in Fago Sylvatica.

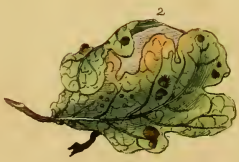
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PLATE CXCIII.

PHALÆNA PYRAMIDEA.

COPPER-UNDERWING MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings dark brown, with three waved ſtripes of yellowiſh colour acroſs the upper wings. Second wings ferruginous brown.

PHALÆNA PYRAMIDEA. *Noctua* criſtata, alis fuſcis, ſtrigis tribus undatis flaveſcentibus repandis, poſticis ferrugineis. *Linn. Syſt. Nat.* 2. 856. 181.—*Fab. Spec. Inſ.* 2. 232. 119.—*Ent. Syſt. I.* 3. *p.* 2. 98. 290.

Phalæna ſeticornis ſpirilinguis, alis deflexis, ſuperioribus fuſcis, lineis tranſverſis undulatis nigris, inferioribus ferrugineis. *Geoff. Inſ.* 2. 160. 99.

Phalæna media, alis longis anguſtis, exterioribus linealis et areolis nigris, albis atro rubentibus tranſverſis pulcre depictis, interioribus obſcure rubris. *Ruj. Inſ.* 159. 9.

The ſingular pyramidal protuberance on the poſterior part of the Caterpillar has furniſhed an excellent ſpecific name for the perfect Inſect. It is found on the Oak, Sallow, and Blackthorn in May;

 changes

changes to the pupa ſtate the firſt week in June; the Moth comes forth in July. The Caterpillar ſpins a fine white ſilken web between two or three leaves in the manner repreſented in the plate at Fig. 1. Fig. 2. the chryſalis, which the web envelopes. Phalæna pyramidea is not a common ſpecies in this country.

PLATE CXCIV.

CHRYSOMELA FASTUOSA.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ like a necklace of beads, encreaſing in bulk towards the ends. No margin round the elytra or thorax.

SPECIFIC CHARACTER

AND

SYNONYMS.

Oval, ſhining like gold, with three longitudinal ſtripes of blue on the ſhells.

CHRYSOMELA FASTUOSA; ovata aurea, coleoptris lineis tribus coeruleis. *Fab. Syſt. Ent.* 101. 36.—*Spec. Inſ.* 1. 124. 48.—*Linn. Syſt. Nat.* 2. 588. 18.

Chryſomela viridis nitida, thorace antice excavato, faſciis elytrorum longitudinalibus coeruleis. *Geoff. Inſ.* 1. 261. 11.

Coccinella faſtuoſa. Scop. Ent. carn. 232.

This beautiful Inſect is rarely taken in England: we ſometimes receive it from Germany, where it is more common; a variety of it is alſo a native of North America.

The natural ſize is ſhewn at Fig. 1. In ſome ſpecimens blue is the predominant colour, in others a fine bronze or golden hue; the ſexes are diſtinguiſhed by the colours in many inſtances.

PLATE CXCV.

SPHINX ZONATA.

RED-BELTED SPHINX.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thickeſt in the middle. Wings when at reſt deflexed. Fly ſlow, morning and evening only.

SPECIFIC CHARACTER.

Wings tranſparent, veined, margined with a band, or ſtreak of black. Abdomen bearded at the extremity, black; with one ſegment in the middle, red.

This is clearly an undeſcribed Inſect. It bears the ſtrongeſt affinity to the *Sphinx Tipuliformis* of Linnæus; but as the zone or belt of red colour is an unerring diſtinction of our Inſect, it cannot belong to that ſpecies. Fabricius having ſeparated the Linnæan ſphinges into three new genera, *Sphinx*, *Seſia*, and *Zygaena*, this Inſect muſt be included under the genus *Seſia* of his ſyſtem; two of the ſpecies he has deſcribed under that head, *S. culiciformis* and *tenthrediniformis* bear ſome reſemblance to our *Sphinx Zonata*, but are certainly diſtinct ſpecies.

Sphinx Zonata is rare in England; the natural ſize is ſhewn at Fig. 1. of the annexed plate. The fine purple appearance of the body diſappears in ſpecimens that have been kept long in a cabinet.

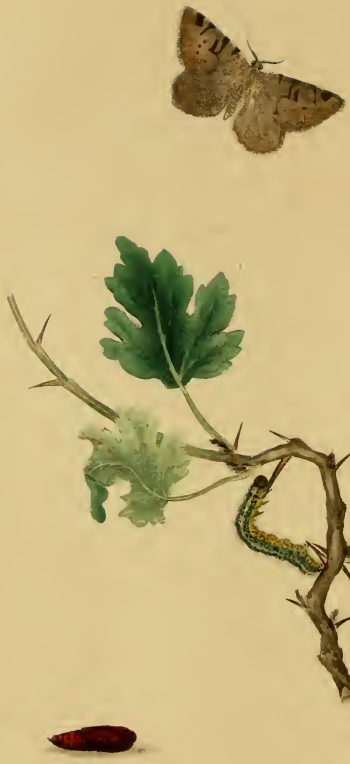

PLATE CXCVI.

PHALÆNA WAUARIA.

L, or Gooseberry Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ taper from the base. Wings in general deflexed when at rest. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings grey: four black, irregular ſtripes on the interior part of the upper wings; one reſembling letter L.

Phalæna Wauaria: pectinicornis, alis cinereis, anticis faſciis quatuor nigris abbreviatis inæqualibus. *Linn. Syſt. Nat.* 2. 863. 219.—*Fn. Sv.* 1248.—*Fab. Spec. Inſ.* 2. 249. 43.

Phalæna minor, alis amplis cinereo albicantibus 4 in exteriorum margine maculis linearibus e rufo nigricantibus. *Raj. Inſ.* 179.
Merian Europ. I. tab. 25. *fig.* 151.
Friſch. Inſ. 3. *tab.* 3. *fig.* 1.
Roeſ. Inſ. 1. *phal.* 3. *tab.* 4.
Wilks Pap. 52. *tab.* 2. a. 2.
Ammiral. Inſ. tab. 13. *fig.* 2. 3.

Except

Except *Phalæna Groſſulariata**, figured in the early part of this work, few ſpecies are more common than this, on the ſmaller kinds of fruit trees, but particularly the Gooſeberry. Harris calls it the L Moth from a ſuppoſed reſemblance of that letter in ſome of the dark marks on the upper wings.

The young Caterpillars appear almoſt as early as the leaves, and change to chryſalis late in may; in this ſtate they remain about twenty days before the Moth is produced.

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* Currant Moth.

PLATE CXCVII.

SIREX GIGAS.

Largest Tailed Wasp.

Hymenoptera.

GENERIC CHARACTER.

Two ſtrong jaws. Palpi two. Antennæ filiform, of about twenty-four joints. Sting projected, ſerrated like a ſaw. Abdomen terminate in a ſpine. Wings lance-ſhaped.

SPECIFIC CHARACTER

AND

SYNONYMS.

Abdomen of nine ſegments; the 3, 4, 5, 6, black; the others yellow. Thorax hairy.

Sirex Gigas abdomine ferrugineo: ſegmentis. 3. 4. 5. 6 nigris, thorace villoſo. *Linn. Syſt. Nat.* 2. 928. 1.—
Fn. Sv. 1573.
Fab. Ent. Syſt. 2. *p.* 124. 139.
Roeſ. Inſ. 2. *Veſp. tab.* 8. 9.
Sulz. Inſ. tab. 18. *fig.* 114.
Schæff. Icon tab. 1. *fig.* 2. 3.
Reaum. Inſ. 6. *tab.* 31. *fig.* 1. 2.
Degeer Inſ. 1. *tab.* 36. *fig.* 1. 2.
Seb. Muſ. 4. *tab.* 53. *fig.* 15.

The

The Sirex genus, as it ſtands in the *Entomologia Syſtematica* of Fabricius, includes only twenty-ſix ſpecies; theſe are chiefly European Inſects; but very few are natives of this country. The Sirex Gigas is found in the north of Europe; it has been taken in England, but very rarely: Yeats and Berkenhout mention it as a Britiſh ſpecies, and we have been informed that it is ſometimes taken in Scotland. It is likely to be met with in Pine foreſts, as the female ſeems to prefer that wood to depoſit her eggs in. As no Engliſh Entomologiſt has attempted to deſcribe the peculiar habits of this tribe of Inſects, and eſpecially of Sirex Gigas, the following particulars may be ſatisfactory to our readers.

The extenſive foreſts of Germany furniſhed the accurate Roeſel with many opportunities of finding and obſerving the metamorphoſis of Inſects that are rarely to be found in other parts of Europe; and this enabled him to favour the world with a particular deſcription and ſeries of figures of all the changes of Sirex Gigas, in the *Bombyliorum et Veſparum* of his *Inſecten Beluſtigung*. His figure of the female Inſect agrees with that we have given; the male is conſiderably ſmaller, and has no ſting *. The ſting of the female conſiſts of three parts, a ſheath which divides into two parts or valves, and a fine inſtrument ſomewhat reſembling a needle; it is with this inſtrument it wounds its enemies, and the ſting is ſaid to cauſe an excruciating pain. The microſcope diſcovers this part to be beſet with a number of very minute teeth, like the edge of a ſaw: with this ſting the creature can pierce the wood of ſound trees; for we ſuſpect, it does not always depoſit its eggs in ſuch as are decayed, but rather in ſuch as will ſupply the larva with nouriſhment when it is hatched. The eggs are laid in cluſters of two or three hundred together; they are of a pale yellow colour, about the thirtieth part of an inch in length, and ſhaped like a weaver's ſhuttle. The larva lives in the body of the tree, enlarging its habitation as it increaſes in ſize, for it never leaves the tree till it becomes a winged creature.

* This is a generical diſtinction.

The

The larva when full grown is about an inch and a quarter in length, and as thick as a goose quill. It is a heavy sluggish creature, almost cylindrical, the head very small, and the whole of an uniform pellucid yellowish colour. It has a small spine at the end of the body like those by which the larva of some spinges are distinguished: this spine is also a striking character in the perfect Sirex. In the pupa the form of the winged creature is more visible than in the larva state; it is of a browner colour than the larva, and the rudiment of the sting and legs are very visible.

In the early editions of the Systema Naturæ of Linnæus, the sirices are arranged with the ichneumons in one genus; but later observations induced Linnæus to make two genera of them in his last works. *Geoffroy* and Schæffer have added some particulars to the Linnæan generic character; these principally relate to the number of joints in the tarsi.

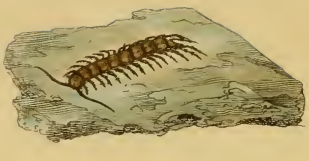

PLATE CXCVIII.

SCOLOPENDRA FORFICATA.

APTERA.

WITHOUT WINGS.

GENERIC CHARACTER.

The ſame number of feet as ſegments of the body. Antennæ ſetaceous. Palpi two, jointed. Body depreſſed or flat.

SPECIFIC CHARACTER

AND

SYNONYMS.

Feet fifteen on each ſide.

SCOLOPENDRA FORFICATA: pedibus utrinque 15. *Linn. Syſt. Nat.* 2. 1062. 3.—*Fn. Sv.* 2064.—*Geoffr. Inſ.* 2. 674. 1. —*Fab. Spec. Inſ.* 2. 532. 3.—*Ent. Syſt.* 2. 390. 4.

Scolopendra ruſo fuſca, pedibus utrinque 15. *Degeer Inſ.* 7. 557. 1. *tab.* 35. *fig.* 12.

Sulz. Inſ. tab. 24. *fig.* 155.

Schæff. I. pl. 46. 12.

This ſingular creature not only changes its ſkin ſeveral times; but, as it advances in age the ſegments of which the body is compoſed increaſe in number: the Inſect when full grown has nine ſuch ſegments. Linnæus mentions it as a native of America: in many

parts of Europe it is not uncommon: in England it is found under looſe ſtones in damp places, and runs ſwiftly.

Fabricius has made a falſe quotation under this ſpecies to the Fundamenta Entomologica of *Schæffer*; as errors will occur in the moſt accurrate works, we ſhould not deem it neceſſary to notice this circumſtance, if he had not continued the ſame miſtake from his Species Inſectorum publiſhed in 1781 to his laſt work Entomologia Syſtematica, *emenda et aucta*, &c. publiſhed in 1793.—his reference is *Schæff. Elem. tab.* 3. *fig.* 1.—On examining that part of Schæffer's works, we find the figure he quotes is a ſpider! Scolopendra forficata is given in the 46th plate of Vol. I. of that author's *Icones Inſectorum circa Raſtiſbonam indigenorum*, &c. as quoted amongſt the ſynonyms above.

The Scolopendra forficata is, we believe, the largeſt of the genus found in this country. In many parts of the world, ſome kinds are found of a frightful ſize and aſpect; the Scolopendra Morſitans of the Eaſt-Indies, is about five inches in length, and as thick as a gooſe quill. Sir G. Staunton, in his Hiſtorical Account of the Embaſſy to China, mentions the Scolopendras and ſcorpions of that country: we have one ſpecies of the former from China that exceeds in magnitude every one of the genus we have ſeen from other parts of the world, and is perhaps the largeſt known; it is near one foot in length, and is about one inch and an half round the girth of the body; the colour is of a fine ſhining cheſtnut brown, the legs inclining to yellow. The moſt ſingular Inſect of this kind in England is the Scolopendra electrica, which ſometimes emits a ſpark or flaſh of light in the dark.

Fig. I. repreſents the underſide of the head and antennæ, magnified.

PLATE CXCIX.

PAPILIO C. *album.*

COMMA BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ terminate in a club. Wings, when at reſt, erect. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deeply ſcalloped, angulated, reddiſh brown, with black ſpots. Beneath, a white ſpot reſembling letter C on the under wings.

PAPILIO C. *album:* alis angulatis fulvis nigro maculatis, poſticis ſubtus. C. albo notatis. *Lin. Syſt. Nat.* 2. 778. 168.—*Fn. Sv.* 1059.—*Fab. Spec. Inſ.* 2. 93. 409.
Robert. Icon. tab. 23.
Merian. Europ. tab. 14. *fig.* 1.
Reaum. Inſ. 1. *tab.* 27. *fig.* 9. 10.
Harris Aurel. tab. 1. *fig. a—d.*
Roeſ. Inſ. 1. *pap.* 1. *tab.* 5.
Eſp. pap. 1. *tab.* 13. *fig.* 3.
Bergſtræff. Inſ. 2. *tab.* 38. *fig.* 1—5.
Seb. Muſ. 4. *tab.* 1. *fig. G.*

In colours and markings the Comma Butterfly ſeems at firſt ſight allied to *Papilio Urticæ* (*Tortoiſeſhell Butterfly*), but the elegant ſcallops of the margins of the wings ſufficiently diſtinguiſhes it

from every other Britiſh ſpecies: indeed wings indentated in this remarkable manner are rarely ſeen in any Inſects, thoſe from foreign countries not excepted. *Papilio Gaureum*, a native of Aſia according to Fabricius, and figured amongſt the Inſects found in North America, by *Abbot*, approaches nearer to it than any diſtinct ſpecies we are acquainted with. The larva is known by a broad white ſpace on the back that extends from the poſterior extremity to the eighth joint of the body: it has one peculiarity that muſt not be omitted; when it is ſuſpended by the tail from a ſmall twig or leaf, the head is bent upwards, and the whole creature perfectly reſembles hook.

There is more than one brood of this ſpecies in a year: the Butterflies are generally found in June, the ſecond brood late in Auguſt. The Caterpillars are ſometimes found in February, but oftener in July; they remain about a fortnight in chryſalis.

PLATE CC.

PAPILIO DAPLIDICE.

BATH-WHITE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ terminate in a club. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings round, white. Margin brown, underſide marked with yellow, green, and white ſpots.

PAPILIO DAPLIDICE: alis integris rotundatis albis, margine fuſcis, ſubtus luteo griſeis albo maculatis. *Lin. Syſt. Nat.* 2. 760. 81. *Papilio Daplidice. Pall Spicil. faſc.* 9. *tab.* 2.
Cramer Inſ. 15. *tab.* 171. *fig. C. D.*
Seb. Muſ. 4. *tab.* 23. *fig.* 11. 12. 15. 16.
Schæff. Icon. tab. 79. *fig.* 2. 3.
Petiv. Gazoph. tab. 1. *fig.* 7.

In a former deſcription we have noticed the locality of one ſpecies of the Butterfly tribe (*Pap. Hero*) in this country; of the Pap. Daplidice we have alſo to obſerve, that it is only found in the environs of Bath. We have been informed that it is found in ſome part

part of Scotland, but our information does not fully authorize us to give it as a native of that part of the Britiſh empire. If it is any where common, it is in Germany and in Hungary. It is found in Africa, and we have alſo a variety of it from North America. Fabricius does not mention it as a native of England; and it is ſo ſcarce with us that few Engliſh cabinets have a ſpecimen of it. The trivial appellation *Bath-White* Butterfly has been given to it by ſome Engliſh Entomologiſts. The ſmall number of foreign authors who have figured this ſpecies ſufficiently notes its ſcarcity in Europe, and we are not acquainted with the works of any Engliſh author that has a figure of it.

PLATE CCI.

PANORPA COMMUNIS.

NEUROPTERA.

GENERIC CHARACTER.

Beak horny, cylindrical. Palpi 2.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings, equal length, ſpotted with black.

PANORPA COMMUNIS: alis æqualibus nigro maculatis. *Lin. Syſt. Nat.* 2. 915. 1.
Fn. Sv. 15. 16.
Geoff. Inſ. 2. 260. 1. *tab.* 14. *fig.* 2.
Degeer. Inſ. 2. 2. 86. *tab.* 24. *fig.* 3. 4.
Reaum. Inſ. 4. *tab.* 8. *fig.* 9.
Sulz. Hiſt. Inſ. tab. 25. *fig.* 5, 6.
Schæff. Icon. tab. 88. *fig.* 7.

The Panorpa communis is very common in fields in the ſummer. Its metamorphoſis is entirely unknown.

The tail of the male is armed with a weapon, ſomewhat reſembling the ſting of a ſcorpion. The tail of the female has an appendage, but very different in its ſtructure. Thoſe parts of both ſexes are repreſented in our plate, of the natural ſize, and magnified.

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2
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PLATE CCII.

FIG. I.

PHALÆNA DITARIA.

MAID OF HONOR MOTH*.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ feathered. Wings green, with brown ſpots near the margins.

PHALÆNA DITARIA: pectinicornis alis viridibus: maculis marginalibus ferrugineis. *Fab. Ent. Syſt.* 3. *p.* 2. 152. 82.
Phalæna bajularia: *Wien. Verz.* 97. 6.

This appears to be a local ſpecies. It has been found for many years paſt in the month of June, near the Oak of Honor, by Peckham. We have never heard that it has been taken in any other place in England.

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* *Harris's Catal.* 31. 218.

Fabricius refers only to one author for this ſpecies. He ſays it feeds on the oak. We are uncertain whether it has ever been figured in any work before.

FIG. II.

PHALÆNA ALBICILLATA.

CLIFDEN BEAUTY.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ ſetaceous. Wings whitiſh in the diſk, with a broad margin of pale black. A large dark ſpot on the interior part of the upper wings.

PHALÆNA ALBICILLATA: ſeticornis alis omnibus nigricantibus: faſcia lata alba immaculata. *Linn. Syſt. Nat.* 2. 870. 255.—*Fn. Sv.* 1278.—*Fab. Ent. Syſt.* 3. 182. 190. *Clerk. Icon. tab.* 1. *fig.* 12. *Knoch. Beytr.* 1. 40. 1. *tab.* 2. *fig.* 8.

The trivial appellation, *Clifden Beauty*, has been given to this Inſect by ſome early Engliſh entomologiſts, who had not met with it in any other part of the country. It has ſince been taken in ſeveral other parts of the kingdom; but in Kent particularly. Clerk deemed it worthy of a place among his rarities; and it is ſtill conſidered an exceeding ſcarce and fine ſpecies. Our ſpecimen was taken in June, 1797, in Darent Wood, Dartford.

FIG. III.

PHALÆNA PORCELLATA.

CLIFDEN BEAUTY LIKENESS.

LEPIDOPTERA.

PHALÆNA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Antennæ ſetaceous. Firſt wings white, with three brown bands, a white ſpot on the exterior one. Second wings white, with a brown margin.

PHALÆNA PORCELLATA: ſeticornis alis anticis albis: faſciis tribus fuſcus; media dimidiata, poſtica marginali: macula alba. *Fab. Ent. Syſt.* 3. 185. 201.

Phalæna Porcellata. *Wien. Verz.* 114. 1.

The ſimilarity of this to the foregoing ſpecies, induced us to figure both on the ſame Plate. Phalæna Porcellata is very common in ſummer. It appears in the winged ſtate about the latter end of May. Linnæus has not deſcribed this Inſect. Fabricius has given its ſpecific character, above quoted. We ſuſpect that it has not been figured by any author.

PLATE CCIII.

FULGORA EUROPÆA.

EUROPEAN LANTERN CARRIER.

HEMIPTERA.

GENERIC CHARACTER.

Forehead elongated. Antennæ below the eyes, conſiſt of two articulations. Beak or roſtrum bent inwards under the body.

SPECIFIC CHARACTER

AND

SYNONYMS.

Fore part of the head conic, body green. Wings tranſparent, reticulated.

FULGORA EUROPÆA: fronte conica, corpore viridi alis hyalinis reticulatis. *Linn. Syſt. Nat.* 2. 704. 9.
Fab. Ent. Syſt. 4. *p.* 6. 19.
Sulz. Hiſt. Inſ. tab. 9. *fig.* 5.
Stoll. Cicad. 1. *tab.* 11. *fig.* 51.

Simple as this little creature may appear to the general reader, the Entomologiſts of this country eſteem it a rarity; for it was not imagined that England produced any ſpecies of its ſingular genus till lately.

Mr. Yeats, in his Inſtitutions of Entomology, mentions two ſpecies of it that have been caught in this country; one by Mr. *Hudſon*, author of the *Flora Anglica*, the other by Mr. *Grey*. It is to be lamented, that he does not inform us preciſely what were the ſpecies. We learn that Fulgora Europæa was the Inſect taken by Mr. Hudſon; the other ſeems undetermined.

The Fulgora Europæa very much reſembles ſome of the Cicadæ in form and ſize, and have, therefore, been probably overlooked by Engliſh collectors of Inſects. Fabricius deſcribes it as a native of France and Germany; but it is very ſcarce in cabinets of foreign Inſects alſo. Perhaps it is not common in any country.

This ſpecies does not exhibit any prominent features of its ſingular genus; it has only a ſmall conic hollow projection, or lantern, on the fore-part of the head, inſtead of the large projection that characteriſe moſt of the exotic Fulgoræ. It is not unlikely, however, that it may poſſeſs, though in a ſmall degree, the aſtoniſhing property of diffuſing a radiance of light, which particularly diſtinguiſh *F. Lanternaria* of South America, *F. Candelaria* of China, and ſeveral other ſpecies. The light of ſome of theſe Inſects, according to the reports of Naturaliſts, and travellers in foreign countries, is ſufficiently vivid and conſtant to anſwer many purpoſes. Some of the Catholic miſſionaries aſſert, that they could ſee diſtinctly to read and write by the light of one of them; and that ſeveral of them being faſtened together, ſerve to light the Indians when they travel in the night.

The roſtrum, or beak, through which the Fulgoræ Europæa (like others of the ſame genus) ſucks its nutriment, ſeems to form a part of the hollow projection in the front of the head; the tube lays cloſe to the belly, between the ſix legs. To explain the ſingular ſtructure of this tube or roſtrum, we have given a front and a profile view of it as it appeared under the lens of a microſcope.

Our ſpecimen is altogether green, except the wings; the reticulations of which are alſo of the ſame colour; and as in Sulzer's figure, the clear parts of the wings were ſtrongly tinged with green alſo.

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PLATE CCIV.

FIG. I.

SPHINX LINEATA.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thickeſt in the middle. Fly flow morning and evening only.

SPECIFIC CHARACTER

AND

SYNONYMS.

Firſt wings greeniſh, or olive colour, with bands and ſtreaks of white. Second wings black with a broad red band on each.

SPHINX LINEATA: alis vireſcentibus: faſcia ſtriiſque albis, poſticis nigris: faſcia rubra. *Fab. Ent. Syſt. t.* 3. *p.* 1. 368. 39.
Sphinx Daucus Cram. Inſ. 11. tab. 125. fig. D.
Sphinx Koechlini. *Fueſſ. Arch.* 1. *tab.* 4.

This fine Inſect is a native of Europe and America. It has a place in every cabinet of Engliſh Inſects; but on what authority it will be difficult now to determine. It is highly probable, that the teſtimony of its diſcovery in England is now forgotten, like that of Papilio Podalirius, figured in another part of this work.

The following deſcription of its Caterpillar, which we have ſeen preſerved, and in foreign drawings, will enable the curious in Inſects to ſearch after it with, at leaſt, a diſtant chance of ſucceſs. The

general colour of the Caterpillar is green, varied with yellow; and ſome ſtreaks and ſpots of red down the back; it has alſo a large black ſpot on each ſide every ſegment; the head is black; and it has a ſpine, or tail. This is the appearance of it in one ſkin; it caſts its ſkin ſeveral times, and will therefore vary in ſome degree from this account.—The pupa is yellowiſh brown, ſpeckled with black. It feeds on *Ladies Bed-ſtraw*, *Madder*, *Gooſe-graſs*, &c.

FIG. II.

PHALÆNA STATICES.

FORRESTER.

LEPIDOPTERA.

SPHINX.

SPECIFIC CHARACTER.

Firſt wings green blue; ſecond brown.

SPHINX STATICES: *Linn. Syſt. Nat.* 2. 808. 470.—*Fn. Sv.* 1098.
ZYGOENA STATICES: viridi cœrulea alis poſticis fuſcus. *Fab. Ent. Syſt. T.* 3. *p.* 1.406. 68.
Geoff. Inſ. 2. 129. 40.
Robert. Icon. tab. 30. *fig.* 1.
Petiv. Muſ. 35. 329.
Schæff. Icon. tab. 1. *fig.* 9.
Eſp. Inſ. 2. *tab.* 18. *fig.* 2.

Found in the winged ſtate in May.—Frequents meadows. The larva is deſcribed of a very deep black, with a line of white down the back, and ſome lunar ſpots of the ſame colour in different parts. It feeds on docks.

PLATE

2

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PLATE CCV.

FIG. 1. 1.

CURCULIO LAPATHI.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ clavated, elbowed in the middle, and fixed in the ſnout, which is prominent.

SPECIFIC CHARACTER

AND

SYNONYMS.

Snout long, two teeth on the thighs. White and black varied. Thorax and wing caſes rough with prickles.

CURCULIO LAPATHI: longiroſtris femoribus bidendatis albo nigroque variis, thorace elytriſque muricatis.—*Linn. Syſt. Nat.* 608. 20.—*Fn. Sv.* 591.
Fab. Ent. Syſt. 1. 429.

Curculio Lapathi: *Oliv. Inſ.* 83. *fig.* 69. 6.
Degeer Inſ. 5. 223. 16. *tab.* 7. *fig.* 1. 2.

Found on the Willow in May.

The figures 1. 1. exhibit the natural ſize and magnified appearance.

FIG.

FIG. 2. 2.

CURCULIO HORTULANUS.

COLEOPTERA.

CURCULIO.

SPECIFIC CHARACTER

AND

SYNONYMS.

Nearly globular. Aſh colour, with two black ſpots on the longitudinal ſuture of the wing caſes.

CURCULIO HORTULANUS: ſubgloboſus cinereus, punctis duobus nigro futuræ longitudinalis coleoptrorum.—*Geoff.* 1. 298. 48.
Villers. 1. 202. 118.

Fabricius has omitted this ſpecies in his works, though Geoffroy and Villers have both deſcribed it. It is found on plants of the ſcrophularia genus (figwort.)

FIG.

FIG. 3. 3.

CURCULIO AVELLANÆ.

COLEOPTERA.

CURCULIO.

SPECIFIC CHARACTER.

Black. A lunated, oblique, whitiſh mark near the baſe, and a white ſpot near the apex of each wing caſe.

CURCULIO AVELLANÆ: nigra elytris baſi interne lunula faſciaque ante apicem albis.

This minute Inſect ſeems to form an intermediate ſpecies between *Salicis* and *C. Caprea*. It is an undeſcribed Inſect. In the MS. of T. Marſham, eſq; it ſtands under the ſpecific name Avellanæ.—Was found on the Willow in June.

PLATE CCVI.

PAPILIO IO.

PEACOCK BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed at the end. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings angulated, indented. Bright brown, with ſpots of black. A large blue eye on each wing.

PAPILIO IO: alis angulato dentatis fulvis nigro maculatis: ſingulis ocello coeruleo.—*Linn. Syſt. Nat.* 2. 769. 131.—*Fn. Sv.* 1048.—*Fab. Ent. Syſt. I.* 3. *p.* 4. 88. 276.
Roeſ. Inſ. 1. *pap.* 1. *tab.* 3.
Wilk. Pap. tab. 3. *a* 2.
Reaum. Inſ. 1. *tab.* 25. *fig.* 1. 2.
Schæff. Icon. tab. 94. *fig.* 1.
Merian. Europ. 1. *tab.* 26.
Albin. Inſ. tab. 3. *fig.* 4.
Goed. tab. 1. *fig.* 23.
Eſp. Pap. 1. *tab.* 5. *fig.* 2.

We have not a more beautiful Inſect in this country than the Peacock Butterfly. It is, indeed, too common to claim the particular notice of Entomologiſts; but to thoſe who admire moſt the ſplendid ſpecies of this beautiful tribe of creatures, it will probably prove acceptable. The underſide is entirely of a ſhining dark colour, with innumerable waved ſtreaks of black. The upperſide is repreſented in the annexed plate.

The Caterpillars, which are black, beſet with ſpines, and elegantly marked with rows of white ſpots, are frequently found feeding on the nettles, and other low herbage by the ſides of ditches. They change to the chryſalis ſtate the firſt week in July, and appear in the winged ſtate twenty-one days after.

PLATE CCVII.

JULUS TERRESTRIS.

APTERA.

GENERIC CHARACTER.

Feet on each ſide double the number of the ſegments of the body. Antennæ beaded Palpi 2. jointed. Body ſemicircular.

SPECIFIC CHARACTER

AND

SYNONYMS.

Feet 200.

JULUS TERRESTRIS: pedibus utrinque 100. *Linn. Syſt. Nat.* 2. 1065. 3.—*Fn. Sv.* 2066.—*Fab. Ent. Syſt. I.* 2. 394. 8.
Degeer Inſ. 7. 578.
Geoff. Inſ. 679. 1.
Friſch. Inſ. 2. *tab.* 8. *fig.* 3.
Sulz. Inſ. tab. 24. *fig.* 156.
Sulz. Hiſt. Inſ. tab. 30. *fig.* 15.

This ſingular creature is found of a vaſt magnitude in foreign countries. We poſſeſs one of that kind between four and five inches in length. In Europe, or at leaſt in England, they are ſeldom conſiderably larger than the annexed figure.

It has two pair of feet to every ſegment of the body. Theſe are very minute, but give a remarkable appearance to the Inſect. It is found in damp places, generally under ſtones.

PLATE

PLATE CCVIII.

PHALÆNA FIMBRIA.

BROAD-BORDERED YELLOW-UNDERWING MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

NOCTUA.

Thorax creſted. Firſt wings clay-colour, marked with obſcure bands or ſtreaks. Second wings reddiſh orange, with a broad bar of black.

PHALÆNA FIMBRIA: criſtatata alis planis griſeo faſciatis; poſticis helvolis: macula lineari atra. *Linn. Syſt. Nat.* 2. 842. 123.—*Fab. Ent. Syſt. T.* 3. *p.* 2. 59. 165. *Wien. Verz.* 87. 18. *Schreb. Inſ. fig.* 9.

This rare Inſect is diſtinguiſhed from two very common ſpecies that are allied to it, by the broad border of black on the under wings, as its trivial name implies. In the larva ſtate, it is one of that kind collectors denominate under-ground feeders: ſubſiſting chiefly on the roots of graſs, and never coming out of the ground till the evening, for which reaſon it is very rarely taken.

The Moth is very delicate in its appearance; the Caterpillar quite plain. Our ſpecimen changed to cryſalis early in May, and produced the moth in the middle of June.

Fabricius was not informed that it was a native of this country, as appears by his laſt work, in which he deſcribes it only as a native of Germany.

PLATE CCIX.

CERAMBYX LINEATOCOLLIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ articulated, diminiſhing in ſize towards the end. Thorax gibbous, or ſpined on the ſides. Elytra narrow, and of equal breadth.

SPECIFIC CHARACTER.

Entirely covered with hair, greeniſh. Thorax unarmed with ſpines, cylindrical, marked with yellow lines, ſhells without ſpots, brown.

CERAMBYX LINEATOCOLLIS: villoſus virideſcens, thorace mutico cylindrico flavo-lineato, elytris immaculatis fuſcis.—*Marſham's MS.*

We muſt conſider this as a new Britiſh ſpecies of Cerambyx, neither Linnæus nor Fabricius having given any deſcription of it. It is deſcribed only in the manuſcripts of T. Marſham, Eſq. whoſe accurate definition of its characters we have adopted.

It appears to be a local ſpecies. The only two ſpecimens that have occurred to our notice, having been taken in the Iſle of Ely, Cambridgeſhire. Our ſpecimen was found on the bark of the willow.

PLATE CCX.

PHALÆNA LANESTRIS.

Little Egger Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

Bombyx.

Antennæ of the male pectinated, of the female ſetaceous.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings ferruginous, firſt pair with a white ſtripe acroſs each: a white ſpot near the baſe, and another in the middle of each.

Phalæna Lanestris: alis reverſis ferrugineis: ſtriga alba, anticis puncto baſique albis.—*Linn. Syſt. Nat.* 2. 815. 28.—
Fn. Sv. 1105.
Fab. Ent. Syſt. 3. *p.* 1. 429. 68.
Wien. Verz. 57. 2.
Roeſ. Inſ. 1. *phal.* 2. *tab.* 62.

The Caterpillars of the little Egger Moth, feed on black and white thorn, willow, lime-tree, &c. The female depoſits a large cluſter of eggs in a tuft of hair collected from her body. When

 theſe

are hatched, the young begin to ſpin a ſtrong white web, which they enlarge as their ſociety increaſes; they remain together till they have devoured all the leaves of the plant on which they are hatched, or till they are arrived at full ſize to change into the chryſalis ſtate.

Theſe Caterpillars are not very uncommon in ſome parts of the country, eſpecially in Kent. They are ready to change to chryſalis ſtate late in June. The Moth is not produced till April following.

The trivial Engliſh name, Egger Moth, is given to this, and two or three other Moths, from the ſimilitude of the caſe in which the chryſalis is incloſed to the ſhape of egg.

PLATE CCXI.

PAPILIO MACHAON.

SWALLOW-TAIL BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ clubbed at the end. Wings erect when at reſt. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings and tails of a yellow colour, with broad ſpaces of brown marked with yellow lunar ſpots. A reddiſh ſpot on the interior angle of the lower wings.

PAPILIO MACHAON: alis caudatis concoloribus flavis: limbo fuſco; lunulis flavis, angulo ani fulvo.—*Linn. Syſt. Nat.* 2. 750. 33.—*Fn. Sv.* 1031.—*Fab. Ent. Syſt.* 2. *p.* 1. 87.
Roeſ. Inſ. 1. *pap.* 2. *tab.* 1.
Wilk. Pap. tab. 47. *tab.* 1. *a* 1.
Merian. Europ. Inſ. 94.
Friſch. Inſ. 2. *tab.* 10.
Schæff. Icon. tab. 45. *fig.* 1, 2.
Seba Muſ. 4. *tab.* 32. *fig.* 9, 10.
Geoff. Inſ. 2. 54. 23.
Eſp. Pap. 1. *tab.* 1. *fig.* 1.

Papilio Machaon and Papilio Podalirius are the only two ſpecies of Swallow-tail Butterflies that have been found in England. Both are very ſcarce, but Papilio Machaon leſs ſo than Papilio Podalirius, of which a figure has been given in another part of this work.

Entomologiſts mention ſeveral parts of the country in which it has been taken, both in the larva and winged ſtate. Harris ſays it feeds on wild fennel and carrots; that one he found remained in the chryſalis ſtate from the 23d of September to May the 15th following, and another, that changed July the 15th, produced a butterfly the 10th of Auguſt. He adds, that the ſpecies was found in the meadows of Briſtol and Weſtram.

From the number of foreign authors who have given figures of the Butterfly, we may imagine that it is very common on the Continent. Thoſe preſerved in cabinets of Engliſh Inſects are generally brought from Germany, from whence alſo we ſometimes receive preſerved ſpecimens of the Caterpillars.

PLATE CCXII.

MUTILLA EUROPÆA.

EUROPEAN MUTILLA.

HYMENOPTERA.

GENERIC CHARACTER.

Generally want wings. Body covered with down. Thorax blunt at the baſe. Sting pointed; concealed within the body.

SPECIFIC CHARACTER

AND

SYNONYMS.

Head black. Thorax red. Abdomen black; margins of ſome ſegments whitiſh.

MUTILLA EUROPÆA: nigra thorace rufo, abdominis ſegmentis margine albo.—*Fab. Ent. Syſt. t.* 3. 368. 9.

Mutilla Europæa, nigra abdomine feſciis duabus albis, thorace antice rufo.—*Linn. Syſt. Nat.* 2. 966. 4.—*Fn. Sv.* 1727. *Sulz. Hiſt. Inſ. tab.* 27. *fig.* 23, 24.

Apis Aptera: *Udm. Diſſ.* 98. *tab.* 17.

The Mutillæ ſeems leſs clearly defined than moſt of the Linnæan genera. That author deſcribed only a ſmall number of the ſpecies, and was even doubtful whether ſeveral that were placed under that diviſion of his ſyſtem did not more properly belong to ſome other, eſpecially to the ichneumons, among which ſeveral apterous inſects are included.

The

The cauſe of this uncertainty may be partly attributed to our entire ignorance of their manner of life or transformations. Some of the Mutillæ have wings, and others are without. Authors have conſidered the apterous Inſects as the females, and the winged kind as the males, which opinion is countenanced by numberleſs inſtances in almoſt every claſs of Inſects. Others have however maintained that both males and females were winged, and that the apterous Inſects were neuters, preſuming in ſupport of ſuch opinion, that the Mutillæ lived in ſocieties like the Waſps, Ants, and Bees.—From obſervations on a number of exotic ſpecies of this tribe, we have no doubt that the winged Inſects are males, and the apterous kind females.

Yeats alludes to three ſpecies of Mutillæ that have been found in England, but names only the Mutillæ Europæa; and this is the only kind we have ever found. We have taken it on a ſandy pathway, near the entrance of Coombe Wood, Surry.

PLATE CCXIII.

PHALÆNA PRÆCOX.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

NOCTUA.

Thorax creſted. Wings deflexed. Firſt pair aſh-colour with two ſpots on each, and a ſhort daſh of red near the ends. Second pair reddiſh brown.

PHALÆNA PRÆCOX: criſtata alis deflexis cinereis bimaculatis: poſticis faſcia rufa abbreviata.—*Linn. Syſt. Nat.* 2. 854. 174.—*Fab. Ent. Syſt. I.* 3. *p.* 2. 97. 289. *Roeſ. Inſ.* 1. *phal.* 2. *tab.* 51.

When the late Ducheſs of Portland honoured the ſcientific as well as practical part of Entomology with her patronage, her Grace diſcovered, and reared from the caterpillars ſeveral ſpecies of Phalæna, of which collectors were ignorant before. Phalæna Præcox is among the number of thoſe her Grace found in one of the Portland iſles; and the ſpecimen we have figured is one which formed part of her collection.

Fabricius

Fabricius ſays the larva feeds on the thiſtle. The rarity of this creature induced us to depart from our uſual method, and copy the larva and pupa from the plate in the works of Roeſel, apprehending it would be particularly intereſting to Engliſh naturaliſts in general, as that author alone has repreſented it in thoſe ſtates; and no collector that we are informed has met with it within the laſt fifteen years.

PLATE CCXIV.

PHALÆNA RUSSULA.

Clouded Buff Moth.

Lepidoptera.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings deflexed, bright yellow. Margin and antennæ blood red. A lunar-ſhaped ſpot on the middle of the wings.

Phalæna Russula: alis deflexis luteis: margine ſanguineo lunulaque fuſca, antennis ſanguineis.—*Fab. Ent. Syſt. I.* 3. *p.* 1. 180.—*Linn. Syſt. Nat.* 2. 830. 71.
Schæff. Icon. tab. 83. *fig* 4, 5.
Clerk. Icon. tab. 4. *fig.* 1.
Raj. Inſ. 228. 75.

As the Phalænæ are not remarkable for a variety of gay colours, like thoſe of the Papilio genus, an exception to a general rule in the beautiful ſpecies before us, more ſtrongly demands our notice. The male Phalæna Ruſſula, which is known by the pectinated antennæ, is of a fine golden yellow, with a rich, though narrow marginal band of ſanguineous red round the wings. The female is a pretty Inſect, but is more inclined to brown throughout than the male.

This

This ſpecies has been ſuppoſed to feed on graſs in the larva ſtate, but as collectors have very rarely reared it from that ſtate, it has been difficult to determine its proper food. Fabricius mentions lettuce and ſcabious or devil's-bit. The larva is hairy, and in many reſpects very much reſembles that of the Garden Tiger Moth, from which we may perhaps infer that it is a general feeder.

We found the larva in May; ſhortly after it ſpun a web and paſſed into the pupa ſtate, from which the moth was produced the 11th of June following.

PLATE CCXV.

PHALANGIUM CRANCROIDES.

APTERA.

GENERIC CHARACTER.

Eight feet. Four eyes, two on the ſummit of the head, and two others on the ſides. Antennæ reſemble feet, and are placed at the fore-part of the head. Abdomen round.

SPECIFIC CHARACTER

AND

SYNONYMS.

Body of an oblong ovated form, flat. Claws ſmooth, hairy at at the ends.

PHALANGIUM CANCROIDES: abdomine obovato depreſſo, chelis lævibus: digitis piloſis.—*Lin. Syſt. Nat.* 2. 1028. 4. —*Fn. Sv.* 1968.

SCORPIO CANCROIDES: abdomine ecaudato ovato depreſſo fuſco, manibus oblongis.—*Fab. Ent. Syſt. T.* 2. 436. 10.

Chelifer abdomine lineis tranſverſis.—*Geoff. Inſ.* 2. 618. 1.

Chelifer europæus obſcure fuſcis corpore ovato depreſſo, chelis elongatis.—*Degeer Inſ.* 7. 355. 2. *tab.* 9. *fig.* 4.
Roeſ. Inſ. 3. *tab.* 64.
Friſch. Inſ. 8. *tab.* 1.
Schæff. Elem. tab. 38.

The ſynonyms ſufficiently denote the unſettled opinion of eminent naturaliſts in reſpect of the proper genus to which our Inſect ſhould be referred. We have followed the definition of Linnæus, becauſe it

it appears to us more characteriſtic of the creature, which ſhould have a lengthened articulated tail, terminated in a ſharp crooked ſting, to warrant us in placing it among the Scorpions. In the ſyſtem of Fabricius this forms no part of his generical character, but thoſe who are accuſtomed to depend only on the writings of Linnæus, would be perplexed to reconcile the apparent difference between the Phalangia of that author, and the Scorpio of Fabricius.

The general appearance of this creature, except the want of tail, is preciſely that of a Scorpion in miniature.

Mr. Adams, in his Eſſay on the Microſcope, has figured and deſcribed a new ſpecies of this genus; it is ſmaller, and differs in form from our preſent ſpecies: he calls it the Lobſter Inſect. We believe Phalangium Cancroides is the largeſt Inſect of the genus found in England that reſembles a Scorpion.

This Inſect is ſometimes found in the covers of old books, in rotten wood, and other damp and decayed ſubſtances. We once found it faſtened on the body of the *MuſcaVomitoria*, Common Fleſh Fly, from which it could not be extricated without killing and tearing the fly into pieces.

Roeſel has given a figure of it, and repreſented a parcel of its eggs. They are of an oblong form, colour greeniſh, and appear to be depoſited in roundiſh cluſters of about thirty or forty eggs in each.

The natural ſize of our Inſect is repreſented at Fig 1.

PLATE CCXVI.

PHALÆNA LIBATRIX.

HERALD MOTH.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ taper from the baſe. Wings in general deflexed when at reſt. Fly by night.

SPECIFIC CHARACTER

AND

SYNONYMS.

Thorax creſted. Wings deflexed, varied with red and grey; two white ſpots on the anterior wings; edges deeply ſerrated or indented.

PHALÆNA LIBATRIX: criſtata alis incumbentibus dentato eroſis rufo griſeis: punctis duobus albis.—*Lin. ſyſt. Nat.* 2. 831. 78.—*Fn. Sv.* 1143.
Fab. Ent. Syſt. L. 3. *p.* 2. 64. 181.
Wien. Verz. 62. 1.
Geoff. Inſ. 1. 121. 26.
Gocd. Inſ. 1. *tab.* 67.
Albin. Inſ. tab. 32. *fig.* 50.
Schæff. Icon. tab. 24. *fig.* 1. 2.
Roeſ. Inſ. 4. *tab.* 20.
Harris Inſ. tab. 1. *fig. C. D.*
Pod. Inſ. 92. *tab.* 2. *fig.* 9.

The Caterpillar of this Inſect is generally found under the bark of the willow and ſallow, or on the roſe. It is probable there are two broods of it in the year, being ſometimes taken in the winged ſtate early in the ſummer, but more commonly in the month of October; this is the more likely, as the Engliſh Aurelians firſt called it the Herald, from an idea that its appearance warned them of approaching winter.

This Inſect remains about twenty-eight days in the pupa ſtate, the Caterpillar not being found till the beginning of September.

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ERRATA.

ERRATA.

Page 23, For *Phalæna Menthraſtiri*, read *Phalæna Menthraſtri*.—Second line, deſcrip. pl. 189.

Page 60, —— Phalæna ſtatices, *read* Sphinx ſtatices. —Second line, deſcrip. pl. 204. fig. 2.